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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,732	03/14/2001	Richard F. Hammen	A-69071/RFT	5501

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FLEHR HOHBACH TEST ALBERITTON & HERBERT LLP
Suite 3400
Four Embarcadero Center
San Francisco, CA 94111-4187

EXAMINER

THERKORN, ERNEST G

ART UNIT PAPER NUMBER

1723

DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/808,732

Applicant(s)

HAMMEN ET AL.

Examiner

Ernest G. Therkorn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 6, 7, 12 and 26-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 7, 12 and 26-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as obvious over either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) in view of Frechet (U.S. Patent No. 5,334,310). At best, the claims differ from each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in reciting use of a functional group. Frechet (U.S. Patent No. 5,334,310) (column 7, lines 35-64) discloses that functional groups are essential for ion exchange chromatography, hydrophobic interaction, and reversed phase chromatography and allow use of affinants specific for a single compound. It would have been obvious to use a functional group in either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) because Frechet (U.S. Patent No. 5,334,310) (column 7, lines 35-64) discloses that functional groups are essential for ion exchange chromatography, hydrophobic interaction, and reversed phase chromatography and allow use of affinants specific for a single compound.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) in view of Frechet (U.S. Patent No. 5,334,310) as applied to claims 1 and 6 above, and further Biebricher (U.S. Patent No. 4,177,038). At best, the claim differs from either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) in view of Frechet (U.S.

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Patent No. 5,334,310) in reciting use of a tether. Biebricher (U.S. Patent No. 4,177,038) (column 1, lines 34-40) discloses use of a spacer overcomes steric interference. It would have been obvious to use a spacer in either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) in view of Frechet (U.S. Patent No. 5,334,310) because Biebricher (U.S. Patent No. 4,177,038) (column 1, lines 34-40) discloses use of a spacer overcomes steric interference.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) in view of Frechet (U.S. Patent No. 5,334,310) as applied to claims 1 and 6 above, and further in view of Snyder, Introduction to Modern Liquid Chromatography, 1979, 276-279. At best, the claim differs from each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Frechet (U.S. Patent No. 5,334,310) in reciting use of a capping agent. Snyder, Introduction to Modern Liquid Chromatography, 1979, 276-279 discloses "capping" ensures optimum surface coverage by organic groups. It would have been obvious to cap in either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) in view of Frechet (U.S. Patent No. 5,334,310) because Snyder, Introduction to Modern Liquid Chromatography, 1979, 276-279 discloses "capping" ensures optimum surface coverage by organic groups.

Claims 12, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) in view of Frechet (U.S. Patent No. 5,334,310) as applied to claims 1 and 6 above, and further in view of Larson (U.S. Patent No. 5,723,601). At best, the claims

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differ from each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Frechet (U.S. Patent No. 5,334,310) in reciting use of an enzyme. Larson (U.S. Patent No. 5,723,601) (column 1, lines 25-28, column 2, lines 47-50, column 4, lines 2-16) discloses that enzymes are desirable functional groups for continuous beds. It would have been obvious to use an enzyme in each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Frechet (U.S. Patent No. 5,334,310) because Larson (U.S. Patent No. 5,723,601) (column 1, lines 25-28, column 2, lines 47-50, column 4, lines 2-16) discloses that enzymes are desirable functional groups for continuous beds.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) in view of Frechet (U.S. Patent No. 5,334,310) and Larson (U.S. Patent No. 5,723,601) as applied to claims 12, 26, and 27 above, and further in view of Biebricher (U.S. Patent No. 4,177,038). At best, the claim differs from either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) in view of Frechet (U.S. Patent No. 5,334,310) and Larson (U.S. Patent No. 5,723,601) in reciting use of a tether. Biebricher (U.S. Patent No. 4,177,038) (column 1, lines 34-40) discloses use of a spacer overcomes steric interference. It would have been obvious to use a spacer in either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) in view of Frechet (U.S. Patent No. 5,334,310) and Larson (U.S. Patent No. 5,723,601) Biebricher (U.S. Patent No. 4,177,038) (column 1, lines 34-40) discloses use of a spacer overcomes steric interference.

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Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) in view of Frechet (U.S. Patent No. 5,334,310) and Larson (U.S. Patent No. 5,723,601) as applied to claims 12, 26, and 27 above, and further in view of Snyder, Introduction to Modern Liquid Chromatography, 1979, 276-279. At best, the claim differs from either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) in view of Frechet (U.S. Patent No. 5,334,310) and Larson (U.S. Patent No. 5,723,601) in reciting use of a capping agent. Snyder, Introduction to Modern Liquid Chromatography, 1979, 276-279 discloses "capping" ensures optimum surface coverage by organic groups. It would have been obvious to cap in either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) in view of Frechet (U.S. Patent No. 5,334,310) and Larson (U.S. Patent No. 5,723,601) because Snyder, Introduction to Modern Liquid Chromatography, 1979, 276-279 discloses "capping" ensures optimum surface coverage by organic groups.

The remarks urge patentability based upon the allegation that there is no motivation to use Frechet (U.S. Patent No. 5,334,310)'s functional groups in either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092). However, Frechet (U.S. Patent No. 5,334,310) (column 7, lines 35-64) discloses that functional groups are essential for ion exchange chromatography, hydrophobic interaction, and reversed phase chromatography and allow use of affinants specific for a single compound. As such, motivation exists to use a functional group in either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) because Frechet (U.S.

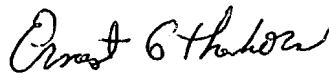
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Patent No. 5,334,310) (column 7, lines 35-64) discloses that functional groups are essential for ion exchange chromatography, hydrophobic interaction, and reversed phase chromatography and allow use of affinants specific for a single compound.

The remarks urge patentability based upon the allegation that Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) does not have reactive sites for adding functional groups. However, in the modification of Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) by Frechet (U.S. Patent No. 5,334,310), Frechet (U.S. Patent No. 5,334,310)'s reactive site monomers would be added to the polymerization mixture in Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092).

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (571) 272-1149. The official fax number is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ernest G. Therkorn
Primary Examiner
Art Unit 1723

EGT
February 12, 2004